

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of:	:		
Chih Yuan HUANG, et al.	:		
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Conf. No.: 4810	:	Group Art Unit:	1746
	:		
Appln. No.: 10/731,150	:	Examiner:	Michail Kornakov
	:		
Filing Date: December 10, 2003	:	Attorney Docket No.:	681939-55US
	:		(P920041)
Title: CLEANING METHOD USING OZONE DI PROCESS	:		

RESPONSE TO RESTRICTION AND ELECTION OF SPECIES REQUIREMENT

This is in response to the Office Action dated November 8, 2006 (Paper No. 20061106) in the above application. This response is being timely filed by January, 8, 2007 in view of the simultaneous submission of a one-month Petition for Extension of Time, including payment of fees.

The Examiner has required a restriction between Group I, which includes claims 1-14 and is directed to a semiconductor cleaning method, and Group II which includes claims 15-20 and is directed to another semiconductor cleaning method. The Examiner states that the Groups I and II are related in that Group I is a subcombination and Group II is a combination. The Examiner argues that the combination as claimed does not require the particulars of the subcombination as claimed because it does not require the specific sequence of cleaning steps, and that the subcombination has a separate utility.

The Examiner further states that if Group I is elected, one of the following species must be elected:

- Specie of claim 7, directed to $\text{H}_2\text{O}:\text{H}_2\text{O}_2:\text{NH}_4\text{OH}$ as a first cleaning solution.
- Specie of claim 9, directed to $\text{H}_2\text{O}:\text{H}_2\text{O}_2:\text{HCl}$ as a first cleaning solution.
- Specie of claim 11, directed to $\text{HF}:\text{HCl}:\text{H}_2\text{O}$ as a first cleaning solution.

With regard to the specie of claim 11, the Examiner did not indicate in the Office Action that claim 11 is a separate specie that may be elected from the above list. However, in a phone conversation with the Examiner on November 14, 2006, the Examiner confirmed that claim 11 should have been included. The Examiner states that the above species are independent or distinct because they recite cleaning solutions having different ingredients and therefore possessing different properties.

The Examiner further states that alternatively, if Group II is elected, one of the following species must be elected.

- Specie of claims 15-18, directed to a cleaning method utilizing a standard cleaning solution.
- Specie of claims 19-20, directed to a cleaning method utilizing HF:HCl:H₂O solution.

The Examiner states that the above species are independent or distinct because they recite cleaning methods utilizing solutions with different ingredients thus possessing different cleaning abilities. The Examiner further contends that claim 15 contains the distinct species exemplified by claims 17 and 18. The Examiner holds that claims 1, 15, and 19 are generic.

Provisional Election

While not necessarily agreeing with the Examiner's requirement or arguments, Applicants provisionally elect Group I, namely claims 1-14, and the specie of claim 7 for further prosecution and examination in this application. Reconsideration and early examination of Group I and the specie of claim 7 are respectfully requested.

Respectfully submitted,

CHIH YUAN HUAN, ET AL.

January 8, 2007
(Date)

By:



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Enclosures: Petition for Extension of Time (one month)